

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-10 (canceled)

11. (currently amended) A turbocharger (1) comprising:
a turbine housing (2), with
at least one supply channel means (9) in said housing (2)
for supplying said exhaust gas;

wherein at least one turbine rotor (4) rotatably
supported within said housing (2), said supply channel means
(9) being arranged to supply said exhaust gas to said turbine
rotor (4) in order to rotate it;

spacer means (16) forming a passage of variable cross-
section between said supply channel means (9) and said turbine
rotor (4) in order to control the amount of exhaust gas
admitted to said turbine rotor (4), said means including

a plurality of vanes (7) of predetermined width
distributed in an annular vane space (13) of approximately
said width around said turbine rotor (4) having two axial ends
to form a passage between them for admitting exhaust gas to
said turbine rotor (4), each vane (7) being pivoted about an
axis to enable control of the amount of exhaust gas,

a vane support ring member (6) supporting said axes of
said vanes (7), said vane support ring member (6) defining one
axial end of said annular vane space (13) by a first
circumferential surface,

a housing ring (15) facing and being spaced from said support ring member (6) by said width to define the other axial end of said annular vane space (13) by a second circumferential surface, and

~~wherein~~ at least two spacer means (16) integrally formed on at least one of said circumferential surfaces of ring members said housing ring (15) or said support ring member (6) by embedding, casting, or machining, and being distributed over its respective circumferential surface to ensure said width of said vane space.

12. (currently amended) The turbocharger (1) according to claim 11 ~~4~~, wherein said spacer means (16) are integrally formed on said vane support ring member (6).

13. (currently amended) The turbocharger (1) according to claim 11 ~~4~~, wherein at least one of said ring members (6 or 15) is of cast metal, said spacer means (16) being integrally cast.

14. (currently amended) The turbocharger (1) according to claim 11 ~~4~~, wherein said spacer means (16) are integrally formed in an outer circumferential border zone of said circumferential surface of at least one of said ring members (6 or 15).

15. (currently amended) ~~The turbocharger (1) according to claim 1,~~ A turbocharger (1) comprising:
a turbine housing (2), with
at least one supply channel means (9) in said housing (2)
for supplying said exhaust gas;

wherein at least one turbine rotor (4) rotatably supported within said housing (2), said supply channel means (9) being arranged to supply said exhaust gas to said turbine rotor (4) in order to rotate it;

spacer means (16) forming a passage of variable cross-section between said supply channel means (9) and said turbine rotor (4) in order to control the amount of exhaust gas admitted to said turbine rotor (4), said means including

a plurality of vanes (7) of predetermined width distributed in an annular vane space (13) of approximately said width around said turbine rotor (4) having two axial ends to form a passage between them for admitting exhaust gas to said turbine rotor (4), each vane (7) being pivoted about an axis to enable control of the amount of exhaust gas,

a vane support ring member (6) supporting said axes of said vanes (7), said vane support ring member (6) defining one axial end of said annular vane space (13) by a first circumferential surface,

a housing ring (15) facing and being spaced from said support ring member (6) by said width to define the other axial end of said annular vane space (13) by a second circumferential surface, and

wherein at least two spacer means (16) integrally formed on at least one of said circumferential surfaces of ring members said housing ring (15) or said support ring member (6), and being distributed over its respective circumferential surface to ensure said width of said vane space,

wherein at least one of said ring members (6 or 15) includes a radial outer circumferential border area of said circumferential surface, and a radial inner circumferential area of said circumferential surface defining a radial plane,

said radial outer circumferential border area shrinking back from said radial plane.

16. (currently amended) The turbocharger (1) according to claim 15 5, wherein said spacer means (16) are arranged in said radial outer circumferential border area of said circumferential surface.

17. (currently amended) The turbocharger (1) according to claim 15 5, wherein said radial outer circumferential border area is provided on said vane support ring member (6).

18. (currently amended) The turbocharger (1) according to claim 11 4, wherein said spacer means (16) are elongated.

19. (currently amended) The turbocharger (1) according to claim 11 4, wherein said spacer means (16) are vane-shaped.

20. (currently amended) ~~The turbocharger (1) according to claim 1,~~ A turbocharger (1) comprising:

a turbine housing (2), with
at least one supply channel means (9) in said housing (2)
for supplying said exhaust gas;

wherein at least one turbine rotor (4) rotatably
supported within said housing (2), said supply channel means
(9) being arranged to supply said exhaust gas to said turbine
rotor (4) in order to rotate it;

spacer means (16) forming a passage of variable cross-
section between said supply channel means (9) and said turbine
rotor (4) in order to control the amount of exhaust gas
admitted to said turbine rotor (4), said means including

a plurality of vanes (7) of predetermined width distributed in an annular vane space (13) of approximately said width around said turbine rotor (4) having two axial ends to form a passage between them for admitting exhaust gas to said turbine rotor (4), each vane (7) being pivoted about an axis to enable control of the amount of exhaust gas,

a vane support ring member (6) supporting said axes of said vanes (7), said vane support ring member (6) defining one axial end of said annular vane space (13) by a first circumferential surface,

a housing ring (15) facing and being spaced from said support ring member (6) by said width to define the other axial end of said annular vane space (13) by a second circumferential surface, and

~~wherein~~ at least two spacer means (16) integrally formed on at least one of said circumferential surfaces of ring members said housing ring (15) or said support ring member (6), and being distributed over its respective circumferential surface to ensure said width of said vane space,

wherein said spacer means (16) are oriented substantially in a tangential direction with respect to the ring member.

21. (currently amended) The turbocharger (1) according to claim 11 ~~1~~, wherein at least part of said spacer means (16) has a bore for passing a connection bolt through.

22. (currently amended) The turbocharger (1) according to claim 21 ~~11~~, wherein said bolt is connected to the opposite ring member.

23. (currently amended) A vane ring for a turbocharger comprising:

an annular surface on both sides of a vane support ring member (6);

a plurality of bores (20) distributed around the circumference of a passage in said annular surface for allowing passage of a plurality of vane (7) shafts (8);

wherein spacer means (16) integrally formed on said annular surface by embedding, casting or machining are distributed over the circumference of said annular surface.

24. (currently amended) The vane ring according to claim 23 ~~13~~, wherein said spacer means (16) are elongated.

25. (currently amended) The vane ring according to claim 24 ~~14~~, wherein said spacer means (16) are vane-shaped.

26. (currently amended) ~~The turbocharger (1) according to claim 14,~~ A vane ring for a turbocharger comprising:

an annular surface on both sides of a vane support ring member (6);

a plurality of bores (20) distributed around the circumference of a passage in said annular surface for allowing passage of a plurality of vane (7) shafts (8);

wherein spacer means (16) integrally formed on said annular surface are distributed over the circumference of said annular surface, and

wherein said spacer means (16) are elongated and oriented approximately ~~oriented~~ in tangential direction of said ring.

27. (currently amended) The vane ring according to claim 23
~~13~~, wherein said vane ring is of cast metal, and wherein the
spacer means (16) is cast with said vane ring.

28. (currently amended) The vane ring according to claim 27
~~17~~, wherein said vane ring and said spacer means (16) are
formed as a precision cast part.

29. (currently amended) ~~The turbocharger (1) according to~~
~~claim 13,~~ A vane ring for a turbocharger comprising:

an annular surface on both sides of a vane support ring
member (6);

a plurality of bores (20) distributed around the
circumference of a passage in said annular surface for
allowing passage of a plurality of vane (7) shafts (8);

wherein spacer means (16) integrally formed on said
annular surface are distributed over the circumference of said
annular surface, and

further comprising a radial outer circumferential border
area of said circumferential surface, and a radial inner
circumferential area of said circumferential surface defining
a radial plane, said radial outer circumferential border area
shrinking back from said radial plane.

30. (currently amended) The vane ring according to claim 29
~~19~~, wherein said spacer means (16) are integrally formed in
said radial outer circumferential border area.

31. (currently amended) The vane ring according to claim 23
~~13~~, wherein at least part of said spacer means (16) has a bore
(18) for passage of a connection bolt.